

ABSTRACT

The present invention provides an electromechanical switch enabled to achieve a high-speed switching response at a low driving voltage. An
5 electromechanical switch body 10, which is an MEMS switch, has a first movable electrode 14 and a second movable electrode 16, both ends of each of which are respectively fixed to and laid on a first anchor 12 and a second anchor 13 formed on a silicon substrate 2, and also has a fixed electrode 18 that faces these movable electrodes. A first electromechanical switch 22
10 enabled to be driven at a low voltage is constituted by the first movable electrode 14, which has a relatively weak spring force, and the fixed electrode 18. A second electromechanical switch 24 enabled to be latched at a low voltage is constituted by the second movable electrode 16, which has a relatively strong spring force, and the fixed electrode 18. Consequently, the
15 first movable electrode 14 is displaced at high speed at a low driving voltage, so that the first electromechanical switch is turned on at high speed. A restoring force causes the second movable electrode 16 to perform natural vibrations at high speed, so that the second electromechanical switch is turned off at high speed. The restored second movable electrode 16 is
20 latched at a low driving voltage, so that the second electromechanical switch is turned on.